



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/602,278	06/23/2000	Jose R. Brunheroto	BC999047/1455p	9149
7590 Sawyer Law Group LLP P O Box 51418 Palo Alto, CA 94303			EXAMINER SALTARELLI, DOMINIC D	
			ART UNIT 2623	PAPER NUMBER
			MAIL DATE 05/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/602,278	BRUNHEROTO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dominic D. Saltarelli	2623	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 30-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed March 28, 2007 have been fully considered but they are not persuasive.

Applicant's argue that the second signatures taught by Echeita are not unique, having identifying information which is the same across multiple frames (applicant's remarks, pages 3-4), and thus do not meet the claimed limitation of generating a second unique signature for each frame.

In response, the uniqueness of the signatures is established by the primary reference, Copriviza (see Copriviza, col. 8, lines 16-39). The second signatures taught by Echeita are used to synchronize advertisement reconciliation data with a broadcasted ad (Echeita, col. 7, lines 37-43), and since the degree of granularity by which Echieta monitors an advertisement includes counting frames aired (Echeita, col. 8, lines 34-40), the 'identifying overhead' [signature data] is such that one frame is identifiable from another, when synchronizing with the ad reconciliation data, for at least the purpose of counting the number of frames aired. These signatures are then correspondingly 'unique' in the same manner as taught by Copriviza when the Copriviza reference is modified in view of Echeita. Further, the sections of Echeita that the applicant refers to in Echeita which teaches data common across multiple frames is not the identified 'overhead' but instead the actual body of the described reconciliation data (see applicant's remarks, page 3, and Echeita, col. 8, liens 8-21).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 30-32, 35-42, and 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copriviza et al. (5,319,453, of record) [Copriviza] in view of Echeita et al. (5,826,165, of record) [Echeita].

Regarding claims 30 and 40, Copriviza discloses a system for monitoring quality of service of play out of a video program (col. 3, lines 50-55), the system comprising:

a program source to encode each frame of the video program with a first unique signature that identifies the frame as being associated with the video program (col. 8, lines 16-39); and

the play-out device to compute statistics associated with play-out of the video program (col. 10, lines 35-54).

Copriviza fails to disclose the video program is digital, the program source creates a meta-stream for the digital video program, the meta-stream including a play-out schedule for the digital video program and a length of the digital video program and a prior to play-out of the digital video program, transmit the meta-stream to a play-out device, the play-out device including a signature engine to

generate a second unique signature for each frame of the digital video program being played out and a matching engine to compare the second unique signature generated for each frame with a corresponding first unique signature encoded with the frame, compare a time of the play-out of the digital video program with a time specified in the play-out schedule, and compare an actual duration of the play-out of the digital video program with the length of the digital video program specified in the meta-stream.

In an analogous art, Echeita teaches a system which automatically monitors the quality of service digital video material (col. 4 line 66 – col. 5 line 4) by creating an associated meta-stream that includes a play-out schedule for the digital video program and a length of the digital video program and a prior to play-out of the digital video program, and transmitting the meta-stream to a play-out device (col. 5, lines 4-14), the meta-stream and the digital video program being linked by identifying signature data found in both the digital video program and the meta-stream (common information found in the headers, or “overhead” information, col. 7, lines 37-43), and utilizing the meta-stream in the program play-out device to determine play-out statistics of the program, including play-out time and duration by automatically comparing the measured values versus expected values (col. 8, lines 9-65 and col. 10, lines 42-59), providing the benefit of a system of reduced complexity for monitoring quality of service of video programming (col. 4, lines 53-66).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Copriviza to include the video program is digital, the program source creates a meta-stream for the digital video program, the meta-stream including a play-out schedule for the digital video program and a length of the digital video program and a prior to play-out of the digital video program, transmit the meta-stream to a play-out device, the play-out device including a signature engine to generate a second unique signature for each frame of the digital video program being played out and a matching engine to compare the second unique signature generated for each frame with a corresponding first unique signature encoded with the frame, compare a time of the play-out of the digital video program with a time specified in the play-out schedule, and compare an actual duration of the play-out of the digital video program with the length of the digital video program [specified in the meta-stream], as taught by Echeita, providing the benefit of a system of reduced complexity for monitoring quality of service of video programming. The system of Echeita extracts [generates] a second unique signature for each frame of the digital video program being played out and compares the second unique signature generated for each frame with a corresponding first unique signature encoded with the frame in the section which aligns the overhead information found the "advertisement reconciliation data" with the header information found in the programming itself, where the signatures taught by Copriviza serve the function of identifying frames when modified in view of Echeita.

Regarding claims 31 and 41, Copriviza and Echeita disclose the system and method of claims 30 and 40, wherein the play-out device includes a non-volatile local storage to store the computed statistics (Copriviza, col. 10 lines 49-54).

Regarding claims 32 and 42, Copriviza and Echeita disclose the system and method of claims 31 and 41, wherein the play-out device is operable to run a quality of service application for automatically analyzing the computed statistics (Echeita, col. 10, lines 49-59).

Regarding claims 35 and 45, Copriviza and Echeita disclose the system and method of claims 30 and 40, wherein the program source transmits the meta-stream to a play-out device using an encryption algorithm (Echeita, col. 6, lines 30-62).

Regarding claims 36 and 46, Copriviza and Echeita disclose the system and method of claims 30 and 40, but fail to disclose the digital video program is distributed to the play-out device from the program source in accordance with MPEG-2 compression.

Examiner takes official notice that the use of MPEG-2 compression is notoriously well known in the art as a form of digital video compression.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system and method of Copriviza and Echeita to utilize MPEG-2 compression, an industry standard form of digital video compression.

Regarding claims 37 and 47, Copriviza and Echeita disclose the system and method of claims 30 and 40, but fail to disclose the program source places the unique first signature associated with a given frame of the digital video program into video image side bands of the frame.

Examiner takes official notice that placing information into video image side bands is notoriously well known in the art, as said placement puts the data in a place where there is no chance of distorting or otherwise interfering with the main video image.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system and method disclosed by Copriviza and Echeita to include placing the unique first signature in the video image side bands of the frame, for the benefit of placing the signature in a video frame region where there is no possibility of distorting or otherwise interfering with the main video image with the signature.

Regarding claims 38 and 48, Copriviza and Echeita disclose the system and method of claims 30 and 40, wherein the program source combines the



Art Unit: 2623

digital video program and the meta-stream into a program stream to be distributed to the play-out device (Echeita, col. 5, lines 4-14).

Regarding claims 39 and 49, Copriviza and Echeita disclose the system and method of claims 30 and 40, wherein the play-out device is a computer (Copriviza, fig. 1, field receiver 36).

4. Claims 33, 34, 43, and 44 rejected under 35 U.S.C. 103(a) as being unpatentable over Copriviza and Echeita as applied to claims 30 and 40 above, and further in view of Iggulden (6,597,405, of record).

Regarding claims 33, 34, 43, and 44, Copriviza and Echeita disclose the system and method of claims 30 and 40, wherein the program source encodes each frame of the digital video program with a first unique signature (Copriviza, col. 8, lines 16-39), but fail to disclose using a hashing algorithm for the signatures.

In an analogous art, Iggulden teaches using hashing algorithms to produce signatures for video frames, allowing the material to be quickly identified in real time (col. 5, lines 25-36).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system and method of Copriviza and Echeita to use a hashing algorithm for signature generation, as taught by Iggulden, for the benefit of fast identification of video frames.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D. Saltarelli whose telephone number is (571) 272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DS

  
ANDREW Y. KOENIG  
PRIMARY PATENT EXAMINER